DOCUMENT RESUME

ED 330 862 CE 057 648

TITLE	Farm Business and Production Management Program Course Competency Record.
INSTITUTION	Madison Area Technical Coll., Wis.
SPONS AGENCY	Wisconsin State Board of Vocational, Technical, and Adult Education, Madison.
PUB DATE	89
NOTE	90p.
PUB TYPE	Guides - Classroom Use - Teaching Guides (For Teacher) (052)
EDRS PRICE	MF01/PC04 Plus Postage.
DESCRIPTORS	Agricultural Education; *Agricultural Production; *Animal Husbandry; Check Lists; *Competence; Competency Based Education; Farm Accounts; *Farm Management; Postsecondary Education; Secondary Education; Soil Science; *Student Evaluation

ABSTRACT

This course competency record is intended to help teachers rate development of student competencies in a farm business and production management program. Competencies are listed for six courses: operating the farm business, soil management, crop management, livestock nutrition, livestock management/farmstead equipment management, and farm records and business analysis. For each course, evidence of achievement of competencies is suggested. Space is provided for teachers to rate students according to the following criteria: awareness, adequate discussion/questions, knowledgeable, attempted application, and adoption/mastery of the competency. Definitions of these ratings are given. (KC)

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Course Competency Record

FARM BUSINESS AND PRODUCTION MANAGEMENT PROGRAM

Operating the Farm Business -- Course Number 090-381

Soils Managment -- Course Number 090-382

Crop Management -- Course Number 090-383

Livestock Nutrition -- Course Number 090-384

Livestock Mangement/Farmstead Equipment Management -- Course Number 090-385

Farm Records and Business Analysis -- Course Number 090-386

For _____
(Student)

Entry Date _____ Completion Date _____

04-851

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Course Competency Record

The Farm Business and Production Management Program curriculum has been organized and stated as competency based instruction. C.B.I. is defined as an organizational structure of learning/teaching which requires description in advance of the knowledge, skills, and attitudes that a student must possess upon exit from the program or course.

This instructional tool has been developed to assist students and instructors as part of the individual on-farm activity to answer four basic questions which will evaluate educational progress.

1. What competencies need to be addressed?
2. What criteria should be considered?
3. What evidence can be examined to determine achievement?
4. What level of attainment has been achieved?

The criteria listed for each competency indicates a standard of performance. The evaluation statement indicates suggested evidence of achievement based upon a scale of attainment. This is an ongoing educational process that should be viewed periodically over the year the course is taught.

UTILIZATION DIRECTIONS

In order to evaluate the progress of Farm Business and Production Management students, a list of selected competencies have been documented. This list is to serve as a guide of skills and attitudes which should be accomplished over the year-long course. The concept of making students aware of the need, adequately discussing and answering related questions will lead toward a level of knowledge that should support the student confidence to try to implement the competency. Further usage of the knowledge and skills of the competency will result in its adaptation and mastery.

Form Definitions:

Awareness (1st Stage): The student is congnizant that the concepts exist -- limited understanding -- no application. Awareness will probably be introduced in the formal classroom; however, a student may be given advanced standing for prior experience with the competency if the student demonstrates awareness responses.

Adequately Discussed/Questioned (2nd Stage). The student participated actively in classroom and individualized learning, developing an understaning of the basic concepts. Student is able to respond to questions with correct answers. Adequately discussing and questions will also be a major part of the formal classroom activity; however, specific training and questioning could be accomplished during individualized one-on-one instruction. Instructor and student interact to reach a minimal level of understanding.

Knowledgeable (3rd Stage). The student is able to manage knowledge in order to make decisions concerning competency and plan for application. This stage is reached when the student can relate to the understanding of the information and the student can explain its importance. This will be determined during one-on-one contact addressing the competency.

Attempted Application (4th Stage). The student has made an effort to implement the studied competency by making application in his own business.This stage is reached when evidence can be furnished illustrating that the student has made the first effort to implement the competency by physical evidence and skill demonstrated by the student to the instructor while at the farm business during one-on-one contact.

Adopted/Mastered (5th Stage). The student demonstrates successful repeated application of the competency. This stage is reached when the student demonstrates repeated usage, adaptation and performance of the competency.

Developed in cooperation with State VTAE Farm Business and Production Mangement Instructors.
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Course Competency Record

FARM BUSINESS AND PRODUCTION MANAGEMENT PROGRAM
Operating the Farm Business -- Course Number 090-38l

For _____
Student

By _____ _____
Instructor Date

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COMPETENCY ATTAINMENT SCALE
Directions: evaluation is done by mutual consent of student and instructor. Place date in appropriate attainment level box.

COURSE COMPETENCY	EVIDENCE OF ACHIEVEMENT	① Awareness	② Adequately discussed Questioned	③ Knowledgeable	④ Attempted Application	⑤ Adopted/ Mastered
1. Establish and record farm business and family goals						
Criteria:						
A. Established realistic standards of family living goals are written	Family living goals listed					
B. Establish realistic standards of farm business goals for farm size, number and kind of livestock, acres of crops, and production goals	Farm business goals listed					
C. Identify need and funding sources which may be used in achieving goals	Needs and funding sources listed					
2. Identify insurance need and develop a plan						
Criteria:						
A. Purchase needed insurance: life, liability, health, personal property, auto and crop	Insurance purchased					
3. Inventory present resources and identify enterprises compatible with goals, abilities and resources						
Criteria:						
A. Develop enterprises compatible with own goals, abilities and resources	List of desired enterprises completed based on inventory of resources available					
	Inventory and comparison with projected needs					

COMPETENCY ATTAINMENT SCALE
Directions: evaluation is done by mutual consent of student and instructor. Place date in appropriate attainment level box.

COURSE COMPETENCY	EVIDENCE OF ACHIEVEMENT	① Awareness	② Adequately discussed Questioned	③ Knowledgeable	④ Attempted Application	⑤ Adopted/ Mastered
4. Develop plan for type and size of farm business and methods to acquire Criteria: A. The student has developed a plan for type and size of the farm business B. List methods needed to achieve plan	Plan completed for the type and size of farm business					
	Methods for achievement plan identified					
	Alternatives identified to meet financial, weather, market or production perils					
5 **Organize and maintain farm financial records** Criteria: A. List available types of record keeping systems B. Select record keeping system which is best suited to be farm operation C. Develop complete set of financial and production records D. Enter farm income and expenses in appropriate columns of selected record keeping systems E. Prepare farm filing system that includes all operating enterprises F. Adopted depreciation schedule for farm bldgs, equipment and livestock	Farm financial and production record keeping system completed including operating income and expenses, depreciation schedule and crop and livestock production enterprises.					

COMPETENCY ATTAINMENT SCALE
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COURSE COMPETENCY	EVIDENCE OF ACHIEVEMENT	① Awareness	② Adequately discussed Questioned	③ Knowledgeable	④ Attempted Application	⑤ Adopted/ Mastered
6. Identify and determine information needed to complete federal and state tax forms						
Criteria:						
A. List tax changes for the current year	Year-end tax estimate completed in November					
B. List items needed for state and federal tax reports						
C. List agencies and individuals that accurately complete income tax forms which meet IRS standards	List of current year changes completed					
D. List items needed for a year-end report and to use in tax arrangement decisions	List of possible year-end purchases to improve tax liability status					
7. Interpret the impact of the state and federal regulations and government farm programs						
Criteria:						
A. Identify what sources are offered by SCS, ASCS and DNR and who to contact	Services and personnel in SCS, ASCS and DNR offices listed					
B. Analyze the impact of government changes in agricultural policy on his business, i. e.: • Dairy price supports • Feed Grain • Farmland preservation • Forest crop law • Zoning • Grade A milk regulations • Workman's Compensation	Impact of government program changes on own operation explained					

COMPETENCY ATTAINMENT SCALE
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COURSE COMPETENCY	EVIDENCE OF ACHIEVEMENT	① Awareness	② Adequately discussed Questioned	③ Knowledgeable	④ Attempted Application	⑤ Adopted/ Mastered
8. Analyze past financial and production performance						
Criteria:						
A. Develop income and earnings statement	Profit and loss, financial and an earnings statement completed					
9. Identify credit needs and develop a plan for financing the operation						
Criteria:						
A. Develop projected monthly and yearly budget/cash flow statement to determine credit needs	Cash flow statement completed and reviewed					
B. Develop list of credit sources including interest rates and terms and determine which is best for your own operation	Credit sources, interest rates and terms most appropriate for your own operation					
10. Select and implement safe approved crop management practices						
Criteria:						
A. Determine average mix of crops to meet goals for farm plan	Soil test results utilized in fertility program					
B. Establish cropping plan, including field layout and rotation	Dates of planting and harvesting established within UW Extension guidelines					
C. Utilize current soil test results						
D. Select adaptable crop varieties						
E. Plant and harvest crops within acceptable UW Extension recommendations relative to plant species soil type and climate	Shields placed properly on power equipment					
F. Establish pest control plan for each crop based on UW Extension recommendations	Chemicals stored, mixed, and applied and containers disposed of per guidelines					
G. Develop safety program involving machinery operation and pesticides	Storage facility(ies) adequate for harvested crops; priority order for improvement or replacement developed					

COMPETENCY ATTAINMENT SCALE
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COURSE COMPETENCY	EVIDENCE OF ACHIEVEMENT	① Awareness	② Adequately discussed Questioned	③ Knowledgeable	④ Attempted Application	⑤ Adopted/ Mastered
II. Develop a plan for feeding livestock Criteria: A. Develop and utilize balanced ration B. Develop total livestock feed needs plan C. Complete purchased feed needs worksheet using thumb rules and guidelines for Farm Plan	Balanced ration completed and implemented					
	Feed needs plan completed					
	Purchased feed needs worksheet completed					
12. Develop a plan for livestock management Criteria: A. Establish livestock identification, breeding health and production records	List of records completed: livestock identification, breeding, health and production					
B. Analyze livestock facilities and housing needs	List of livestock facilities and housing needs completed					
C. Plan sanitation and disease prevention program for livestock D. Develop plan to handle livestock safely	Safe livestock handling practices demonstrated					
13. Develop a land use plan Criteria: A. Procure and interpret a farm soil map	Soil map obtained and interpreted					
	Land use plan developed on the basis of soil classification					

COMPETENCY ATTAINMENT SCALE
Directions: evaluation is done by mutual consent of student and instructor. Place date in appropriate attainment level box.

COURSE COMPETENCY	EVIDENCE OF ACHIEVEMENT	① Awareness	② Adequately discussed Questioned	③ Knowledgeable	④ Attempted Application	⑤ Adopted/ Mastered
14. Identify, interpret and plan for impact of merging farm and agricultural issues and practices						
Criteria:						
A. Identify how these agricultural issues will affect own long term goals: tight credit, over-population, marketing and trade policy	Impact of tight credit, over-production, marketing, and trade policies of own business explained					
B. Determine cost benefit of implementing any new and developing technologies in agriculture	New technologies utilized in farm business listed					

Course Competency Record

FARM BUSINESS AND PRODUCTION MANAGEMENT PROGRAM
Course Number 090-382 - Soil Management

For _____
Student

By _____ _____
Instructor Date

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COMPETENCY ATTAINMENT SCALE
Directions: evaluation is done by mutual consent of student and instructor. Place date in appropriate attainment level box.

COURSE COMPETENCY	EVIDENCE OF ACHIEVEMENT	① Awareness	② Adequately discussed Questioned	③ Knowledgeable	④ Attempted Application	⑤ Adopted/ Mastered
1. Prepare land use plan						
Criteria:						
A. Erosion kept as tolerable levels.	Land use plan completed according to SCS guidelines.					
B. Practice crop rotations.						
C. Compile plan according to Soil Conservation Service (SCS) and Agricultural Stabilization and Conservation Service (ASCS) guidelines.						
D. Provide for wildlife habitat, if applicable.						
2. Collect soil samples						
Criteria:						
A. Prepare field map	Field map completed					
B. Take soil samples according to UWEX bulletin						
C. Complete soil information sheet	Soil samples collected, according to UWEX guidelines					
D. Label soil sample bags						
E. Use ASCS approved laboratories						
3. Interpret soil test information						
Criteria:						
A. Identify components of soil test report	Soil test results interpreted in relation to yield goals					
B. Determine difference between actual and optimum nutrient levels.						
C. Identify pH and lime requirement	Lime and fertilizer requirements calculated					
D. Estimate corrective and maintenance fertilizer requirements						
E. Utilize soil test laboratory report form as a field and/or farm fertility record	Fertility record completed					

COMPETENCY ATTAINMENT SCALE
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COURSE COMPETENCY	EVIDENCE OF ACHIEVEMENT	① Awareness	② Adequately discussed Questioned	③ Knowledgeable	④ Attempted Application	⑤ Adopted/ Mastered
4. Develop a plan to determine, select and budget for fertilizer needs Criteria: A. Calculate macro and micro nutrient fertilizer requirements according to soil test report and yield goals. B. Estimate most economical means of nutrient application. C. Adjust nutrient requirements based on manure application and previous crops. D. Describe functions of plant nutrients.	Fertilizer requirements calculated.					
	Lime and fertilizer application plan completed.					
	Budget prepared for nutrient applications.					
5. Develop a plan for storage and utilization of farm manures. Criteria: A. Recognize nutrient and economic value of manure. B. Determine optimum use of manure. C. Investigate cost effectiveness of manure storage facilities.	Nutrient value of manure calculated.					
	Plan for manure utilization established.					
	Cost/benefit analysis completed for manure storage facilities.					

COMPETENCY ATTAINMENT SCALE
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COURSE COMPETENCY	EVIDENCE OF ACHIEVEMENT	① Awareness	② Adequately discussed Questioned	③ Knowledgeable	④ Attempted Application	⑤ Adopted/ Mastered
6. Identify, select, and use fertilizer and tillage equipment and methods. Criteria:						
A. Calibrate fertilizer application equipment.	Fertilizer application equipment calibrated.					
B. Compare cost effectiveness and timing of various application methods.	Budget worksheet completed which compares various application methods.					
C. Select tillage systems compatible with land use plan.	Tillage system plan selected.					
7. Implement farm safety practices appropriate for soil management. Criteria:						
A. Follow safety guidelines for tillage equipment use.	Safety checklist completed (to include dangers associated with power, velocity and terrain, and personal and environmental welfare with fertilizers and pesticides).					
B. Follow safety guidelines for fertilizer and chemical use.						
8. Implement environmental protection practices. Criteria:						
A. Identify environmental contamination from specific agricultural practices.	Environmental contamination from own agricultural practices identified.					
B. List government regulations.						
C. Use proper rates of application of fertilizers and chemicals.	Fertilizers application consistent with soil test report and chemicals applied according to product label.					
	Applicable government regulations identified.					

COMPETENCY ATTAINMENT SCALE
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COURSE COMPETENCY	EVIDENCE OF ACHIEVEMENT	① Awareness	② Adequately discussed Questioned	③ Knowledgeable	④ Attempted Application	⑤ Adopted/ Mastered
9. Develop and implement a plan for maintenance and replacement of farm machinery and equipment.						
Criteria:						
A. Formulate equipment maintenance plan.	Machinery and equipment maintenance checklist completed.					
B. Determine machine replacement purchases based on needs, profits and land use plan.	Machinery and equipment replacement plan developed.					
C. Compare cost effectiveness of machine ownership, leasing or custom hire.	Comparison of machine ownership, leasing or custom hire calculated.					
10. Identify and plan for emerging farm and agricultural issues and practices.						
Criteria:						
A. Recognize sustainable agriculture ideology.	Comparison of present soil tillage and cultural practices with the limited input aspects of sustainable agriculture practices in the community.					
B. Evaluate utilization of government programs.	Budget comparing limited input alternatives completed.					
C. Analyze profitability of new technology.	Budget calculations analyzing profitability of adopting new technology completed.					

COMPETENCY ATTAINMENT SCALE

Directions: evaluation is done by mutual consent of student and instructor. Place date in appropriate attainment level box.

COURSE COMPETENCY	EVIDENCE OF ACHIEVEMENT	① Awareness	② Adequately discussed Questioned	③ Knowledgeable	④ Attempted Application	⑤ Adopted/ Mastered
II. Conduct farm business analysis and plan farm strategies for the coming year.						
Criteria:						
A. Current financial condition assessed.	Net worth statement completed.					
B. Production efficiency measures evaluated.						
C. Cash flow budget prepared for coming year.	Profit & loss statement completed.					
D. Farm strategies identified for coming year.	Acutal and projected income and expenses completed as provided on the cash flow statements.					
	Farm Business Analysis completed (to include liquidity ratio, asset/ dept ratios, profitability, etc.)					
	Priority list developed and specific enterprise practices to be implemented.					

Course Competency Record

FARM BUSINESS AND PRODUCTION MANAGEMENT PROGRAM
090-383 - Crop Management

For _____
Student

By _____ _____
Instructor Date

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COMPETENCY ATTAINMENT SCALE
Directions: evaluation is done by mutual consent of student and instructor. Place date in appropriate attainment level box.

COURSE COMPETENCY	EVIDENCE OF ACHIEVEMENT	① Awareness	② Adequately discussed Questioned	③ Knowledgeable	④ Attempted Application	⑤ Adopted/ Mastered
I. Select and implement approved crop management practices. Criteria:						
A. Select crop varieties appropriate for own farm environments.	Seed varieties suitable for own farm identified.					
B. Complete plan and crop budget for each crop grown.	Crop plans completed.					
C. Maintain a field by field crop record keeping system.	Budget for crops developed.					
D. Complete a plan for crop pest management.	Crop record keeping system established and maintained.					
E. Follow land use plan for field tillage practices.	Crop pest management plan developed.					
F. Determine least costly methods of cropping operation.	Plan for field tillage practices completed.					
	Least cost methods of growing crops identified.					

COMPETENCY ATTAINMENT SCALE
Directions: evaluation is done by mutual consent of student and instructor. Place date in appropriate attainment level box.

COURSE COMPETENCY	EVIDENCE OF ACHIEVEMENT	① Awareness	② Adequately discussed Questioned	③ Knowledgeable	④ Attempted Application	⑤ Adopted/ Mastered
2. Implement a plan for harvesting and storage of crops. Criteria: A. Compare methods of harvesting and storing crops and select one to meet own needs. B. Determine when a crop is ready to harvest. C. Prepare an inventory of harvested crops. D. Determine the type and amount of crop storage needed.	Comparison of harvesting methods and storage alternatives completed.					
	Each crop harvested at correct time.					
	Inventory completed for each harvested crop.					
	Appropriate crop storage structure(s) utilized; Cost/ benefit comparison of present vs. alternative storage facilities.					
3. Implement farm safety practices for crop management. Criteria: A. Demonstrate knowledge of safety practices for tillage, planting and harvesting equipment. B. Demonstrate knowledge of safety practices for pesticide and fertilizer equipment. C. Demonstrate knowledge of safety practices for tractor operation.	Factory installed shielding always in place on all crop use equipment.					
	All hazardous chemicals and lubricants properly used, stored and disposed of.					
	Recognized safety procedures followed for tractor and equipment operation.					

COMPETENCY ATTAINMENT SCALE
Directions: evaluation is done by mutual consent of student and instructor. Place date in appropriate attainment level box.

COURSE COMPETENCY	EVIDENCE OF ACHIEVEMENT	① Awareness	② Adequately discussed Questioned	③ Knowledgeable	④ Attempted Application	⑤ Adopted/ Mastered
4. Identify, interpret and plan for the impact of emerging farm and agriculture issues and practices. Criteria:						
A. Assess the impact of government programs on cropping plans.	Impact of government programs on crop planning decisions assessed.					
B. Assess the impact of trade agreements on cropping plans.						
C. Assess the feasibility of adapting new cropping technology.	Effects of world market/trade agreements and crop planning decisions assessed.					
	Affect of new technologies on crop planning decisions analyzed.					
5. Conduct Farm Business Analysis and plan strategies for the coming year. Criteria:						
A. Prepare a farm business analysis on crop enterprises.	Farm business analysis on crop enterprise prepared.					
B. Develop cropping plan based on business analysis and land use plan.	Cropping plan developed based on business analysis, land use and plan and market trend information.					
C. Develop crop budgets.						
D. Develop crop plan based on market trends.	Crop budget developed.					

COMPETENCY ATTAINMENT SCALE
Directions: evaluation is done by mutual consent of student and instructor. Place date in appropriate attainment level box.

COURSE COMPETENCY	EVIDENCE OF ACHIEVEMENT	① Awareness	② Adequately discussed Questioned	③ Knowledgeable	④ Attempted Application	⑤ Adopted/ Mastered
6. Develop a crop marketing plan Criteria: A. Assess own crop needs. B. Decision made to feed, sell crops, or buy more. C. Identify selling alternatives. D. Identify buying alternatives.	Harvest crop inventory or crop needs identified.					
	Marketing method(s) determined.					
	Comparison completed of crops grown to feed requirements anticipated.					
	Financial benefits of growing, buying, or selling farm crops determined.					

Course Competency Record

FARM BUSINESS AND PRODUCTION MANAGEMENT PROGRAM
Course Number 090-384 - Livestock Nutrition

For _____
Student

By _____ _____
Instructor Date

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COMPETENCY ATTAINMENT SCALE
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COURSE COMPETENCY	EVIDENCE OF ACHIEVEMENT	① Awareness	② Adequately discussed Questioned	③ Knowledgeable	④ Attempted Application	⑤ Adopted/ Mastered
1. Relate animal physiology to the digestion and assimilation of feedstuffs						
Criteria:						
A. Describe nutrient digestion in the ruminant.	Characteristics of saliva production, NPN utilization, forage digestion and B-vitamin synthesis in the rumen explained					
B. Describe nutrient digestion in the monogastric.	Monogastric digestion of nutrients explained.					
C. Describe unique features of the ruminant digestive tract.	Unique features of ruminant digestion explained.					
2. Calculate nutrient requirements for various classes of livestock						
Criteria						
A. Select correct nutrient levels from NRC tables for an animal specified by instructor.	NRC tables interpreted.					
B. Define nutritional terms used in ration balancing.	Describe nutritional terms explained in class lecture and from source documents					
C. Calculate nutrient requirements using numbers found in NRC table.	Nutrient requirements calculated using NRC tables					

COMPETENCY ATTAINMENT SCALE
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COURSE COMPETENCY	EVIDENCE OF ACHIEVEMENT	① Awareness	② Adequately discussed Questioned	③ Knowledgeable	④ Attempted Application	⑤ Adopted/ Mastered
3. Determine quantity, quality and type of feeds needed compared to feeds available						
Criteria:						
A. Identify amount of each type of feed needed for the farm herd.	Amount of feed types needed calculated per "Livestock Needs and Farm Potential Form".				[redacted]	[redacted]
B. Calculate amount of feed produced on farm.						
C. Determine excess or shortage of feeds needed.	Amount of feeds produced on farm calculated.				[redacted]	[redacted]
D. Obtain samples of feed supplies for nutrient analysis.						
E. Evaluate relative forage quality from lab analysis report.	Excess or shortage of feed supplies for nutrient analysis calculated.				[redacted]	[redacted]
	Samples of feed supplies obtained for nutrient analysis.				[redacted]	[redacted]
	Relative forage quality from lab analysis report evaluated.				[redacted]	[redacted]

COMPETENCY ATTAINMENT SCALE
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COURSE COMPETENCY	EVIDENCE OF ACHIEVEMENT	① Awareness	② Adequately discussed Questioned	(3) Knowledgeable	(4) Attempted Application	(5) Adopted/ Mastered
4. Balance rations for various classes of livestock.						
Criteria:						
A. Identify DMI of animal(s).	Amount of feed consumed per animal per day calculated.					
B. Calculate nutrient intake from home grown feedstuffs.						
C. Determine by difference the amount of additional protein and minerals needed.	Nutrient intakes from home-grown forages recorded on ration balancing worksheet.					
D. Calculate most economic source of nutrients.						
E. Use commercial feed tag information.	Difference and additional protein, energy and minerals needed Computed on ration balancing worksheet.					
	Ration costs compared using SBOM and corn as reference ingredients.					
	Use of guaranteed analysis (including NPN) and ingredients demonstrated.					
5. Minimize metabolic disorders through proper feeding.						
Criteria:						
A. Determine frequency of retained placentas, milk fever, displaced abomasums, ketosis and FCS in herd.	Actual incidence of retained placentas, milk fever, displaced abomasums, ketosis and FCS in own herd calculated.					
B. Apply corrective measures to alleviate problem metabolic disorders if they occur.	Feeding program changed to correct disorders.					
C. Maintain B.F. at or above 3.5%.	Percent B.F. from monthly DHI records listed. Changes in feeding program implemented to alleviate low B.F. tests.					45

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COMPETENCY ATTAINMENT SCALE
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COURSE COMPETENCY	EVIDENCE OF ACHIEVEMENT	① Awareness	② Adequately discussed Questioned	③ Knowledgeable	④ Attempted Application	⑤ Adopted/ Mastered
6. Identify, interpret and plan for effects of emerging farm and agricultural issues and practices.						
Criteria:						
A. Student identifies possible impact of emerging issues related to livestock nutrition.	The student has inventoried feeds supply.					
B. Student identifies the need to develop alternative plan in response to issues.	The student has projected animal feedstuffs needs.					
	The student has developed plans for substituting one feed- stuff for another.					
	The student has developed plans to reduce animal numbers or procure needed feed in a timely fashion.					
7. Conduct farm business analysis and plan farm strategies for the coming year.						
Criteria:						
A. Evaluate: - Milk income per cow - Veterinary expense per cow - Pounds of milk per cow - Debt load per cow - Purchased feed per cow	Results of livestock evaluation completed and compared to VTAE State Farm and local averages.					
B. Establish future livestock goal for farm	Future farm livestock goals listed.					

Course Competency Record

FARM BUSINESS AND PRODUCTION MANAGEMENT PROGRAM
090-385 - Livestock Management/
Farmstead Equipment Management

For _____
Student

By _____ _____
Instructor Date

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COMPETENCY ATTAINMENT SCALE
Directions: evaluation is done by mutual consent of student and instructor. Place date in appropriate attainment level box.

COURSE COMPETENCY	EVIDENCE OF ACHIEVEMENT	① Awareness	② Adequately discussed Questioned	③ Knowledgeable	④ Attempted Application	⑤ Adopted/ Mastered
1. Review and modify a livestock management plan Criteria: A. Inventory list of producer skills and classes of livestock. B. Develop a plan for development of livestock enterprise including such things as increase or decrease in livestock numbers, efficiency and production goals, purebred vs. commercial, etc.	A list of approved, adopted species specific practices performed by the producer.					
	Inventory of livestock by production classification completed.					
	Plan of livestock enterprise goals is completed.					
2. Develop a livestock breeding program. Criteria: A. Describe the anatomy and physiology of reproduction. B. Distinguish between various methods of breeding. C. Distinguish between various genetic selection systems.	Observation of animal behavior. Eighty percent settled on first service.					
	Recognition of reproductive abnormality.					
	Sire selection based on herd evaluation.					

COMPETENCY ATTAINMENT SCALE
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COURSE COMPETENCY	EVIDENCE OF ACHIEVEMENT	① Awareness	② Adequately discussed Questioned	③ Knowledgeable	④ Attempted Application	⑤ Adopted/ Mastered
3. Implement farm safety practices for livestock. Criteria: A. Safely transport livestock. B. Restrain livestock. C. Follow requirements for humane livestock housing, handling and care.	Farmer utilizer safe, humane and efficient means of livestock transport.					
	Approved, safe means of restraint are employed for dehorning, castration, vaccination, etc.					
	Farmer (student) practices safe, humane procedures in live- stock housing, handling, and care.					
	Farmer (student) has adopted, and practices, safe handling of herd sires of all species.					

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COMPETENCY ATTAINMENT SCALE
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COURSE COMPETENCY	EVIDENCE OF ACHIEVEMENT	① Awareness	② Adequately discussed Questioned	③ Knowledgeable	④ Attempted Application	⑤ Adopted/ Mastered
4. Develop a livestock health program. Criteria:						
A. Develop sanitation and disease prevention program for livestock, for production of high quality livestock and livestock products as prescribed by local doctors of veterinary medicine.	Sanitation and disease prevention program appropriate for each livestock species developed.					
B. Describe the proper use and implications of withdrawal, improper use and storage of animal pharmaceuticals.	Animal pharmaceutical usage follows approved practices.					
C. Describe symptoms of livestock diseases and health disorders and actions appropriate for their management.	Veterinary pharmaceutical inventory and recordkeeping systems developed.					
	Veterinary pharmaceuticals stored in approved manner.					
	Diseases, ailments and injuries common to the appropriate livestock species identified and treated as recommended and approved by veterinary practitioners.					

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5. Develop plans for raising young stock and calves. Criteria: A. Describe pre and post partum care of the dam. B. Follow the labor, feed, health and housing requirements for livestock enterprises. C. Develop an economical program for raising livestock for health and growth animals for specific enterprise objectives. D. Describe the physiology of milk secretion.	Plan developed for nutritional, infectious disease pre and post partum management of the dam. Describe parturition management of the appropriate species. Feed, health and housing requirement plan developed for raising youngstock. Program developed for health and growth of appropriate livestock species.					

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6. Develop livestock marketing plan. Criteria:						
A. Describe significant effects that governments and foreign trade have on the outlook for livestock products.	Livestock and livestock product marketing plan completed.					
B. Describe operation of price support programs and their effect on livestock operation (to include milk marketing orders).	Livestock and livestock product marketing plan completed based on market channel information.					
C. Outline factors that influence the price of livestock/livestock products.						
D. Describe the types of organizations that market livestock/ livestock products cooperatively and the benefits farmers gain from them.	Livestock and livestock product marketing plan completed based on quality.					
E. Develop marketing method(s) for your livestock enterprise.	Livestock and livestock product marketing plan completed related to farm organization membership and activity.					
	Livestock and livestock product marketing plan involves cash flow realities.					

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7. Initiate and implement a plan for geographic arrangement, ventilation and utilization of farm buildings.						
Criteria:						
A. Calculate spatial requirements of ventilation systems, corresponding to types of construction.	Plans drawn for at least one farm structure, including air volume, velocity, intake and exhaust capacities.					
B. Develop plan for installation, maintenance and ventilation of specialized facilities, buildings, and material handling equipment.	Information resources utilized in developing plans, i. e., Doanes, UWEX, Butler, Menards, etc.					
C. Describe the principles of organizing the Farmstead Buildings in arrangements that are most effective and efficient.	Plan sketched for installation, maintenance and ventilation for a farm building, including material handling equipment.					
	Farmstead Building arrangement plan diagrammed to include attention to expansion possibilities, work efficiencies and usage of existing structures.					

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8. Develop a plan for installation, operation and maintenance of specialized facilities, such as milking systems, barn cleaners, feeding systems, etc.						
Criteria:						
A. Describe selection, installation and operation of effective milking equipment.	Procedures used in milking cows and milking equipment operated as outlined by National Mastitis Council.					
B. Define different types of construction common to various farm building needs.						
C. Identify and compare types of feed, grain and waste disposal and milking handling equipment.	Plan developed for material handling and milking equipment.					
D. Identify space requirements for livestock, crop and machinery.	Sketch to scale completed for storage and flow pattern of machinery.					
E. Estimate costs of planned construction.	Space and load requirements calculated for stored grains and forage crops.					
	Cost of materials and labor calculated for planned construction or remodeling.					

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9. Develop a livestock enterprise production record.						
Criteria:						
A. Identify livestock production planning and recordkeeping systems.	Livestock inventory completed.					
B. Develop appropriate breeding, feeding and livestock efficiency records.	Production record system for livestock selected.					
	Bookkeeping records initiated for livestock breeding, feeding, and efficiency.					
10. Identify, interpret and plan for emerging farm and agriculture issues and practices.						
Criteria:						
A. Identify, analyze, evaluate and select management alternatives in a timely fashion as issues and/or concerns arise.	List alternatives to be incorporated into own business.					
	Planned alternatives conform to accepted standards of humane treatment of animals.					

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II. Conduct a farm business analysis and plan strategies for the coming year.						
Criteria:						
A. Assess Net Worth Statement.	Net Worth Statement completed.					
B. Assess Profit and Loss Statement.						
C. Compare Actual and Projected Cash Flow Statement.	Profit and Loss Statement completed.					
D. Complete and evaluate Farm Business Analysis.						
E. Compile plan of strategies for the coming year.	Actual and projected income and expenses completed as provided on the Cash Flow Statements.					
	Farm Business Analysis completed (to include Liquidity Ratio, Asset/Debt Ratios, Profitability, etc.)					
	Priority list developed of specific enterprise practices to be implemented.					

Course Competency Record

FARM BUSINESS AND PRODUCTION MANAGEMENT PROGRAM
090-386 - Farm Records and Analysis

For _____
Student

By _____ _____
Instructor Date

BEST COPY AVAILABLE

COMPETENCY ATTAINMENT SCALE
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COURSE COMPETENCY	EVIDENCE OF ACHIEVEMENT	① Awareness	② Adequately discussed Questioned	③ Knowledgeable	④ Attempted Application	⑤ Adopted/ Mastered
I. Identify the economic principles and concepts for farm business management. Criteria: A. Make decisions on the basis of economic benefit to the business. B. Make decisions based on individual and family goals.	Levels of enterprise inputs calculated that will maximize net farm income.					
	Applies levels of enterprise inputs that will maximize net returns from farm enterprises.					
	Alternative crop and livestock budgets (partial budgets) prepared to assess net returns.					
	Economic benefits of maximum profits compared to personal and family goals and objectives.					

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2. Distinguish the various types of farm business arrangements and apply the best one to meet business, individual and family goals. Criteria: A. Organize farm business to best meet business, individual and family goals.	Advantages, disadvantages and features of various methods of organizing a farm business identified.					
	Legal documents necessary to organize the business so it meets farm business and family goals completed.					
	Provisions made for joint farm business arrangements to best utilize individual skills and satisfy personal goals, as applicable.					
3. Evaluate the use of professional management and record keeping services. Criteria: A. Compare present record keeping system adequacy with that of professional record service(s).	Accounting method selected					
B. Select record keeping system or service that meets own business and personal needs.	Financial record keeping system implemented.					
C. Select production record keeping system or service(s) that meet own business and personal needs.	Production testing and record keeping systems used to evaluate production performance for crop and livestock enterprises.					

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4. Review, modify and record farm business and family goals. Criteria: A. Achieve family and business goals. B. Review and modify annually the business and family goals (independently and jointly).	Goals written					
	Goals reviewed annually					
	Family and business goals adjusted as needed					
5. Maintain a set of farm business records Criteria: A. Record farm business transactions B. Apply general depreciation guidelines when making capital purchase decisions C. Use production records in making crop and livestock management decisions.	Income and expense transactions entered in the recordkeeping system.					
	Debt payment records kept current.					
	Hired labor records kept as needed.					
	Capital purchases and sales recorded.					
	Tax implications considered when purchasing depreciable assets.					
	Plan provides for regular and systematic replacement of capital assets.					
	Compare the features and merits of alternative depreciation methods					

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5. Maintain a set of farm business records ***(continued)***	Inventories of feed, livestock and supplies performed.					
	Alternatives available for the cost recovery of raised breeding and dairy livestock evaluated.					
	Livestock production records used as basis for making decisions on feeding, culling, breeding, sire selection and herd health.					
	Crop production records used as basis for making decisions on variety selection, crop rotations, chemical selection and usage, fertilizer application, crop budgeting and soil testing.					
	Forage and feed grains sampled and tested for nutrient levels.					
	Feed analysis records used in feeding and marketing farm forages and grains.					

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6. Prepare farm business financial statements. Criteria: A. Prepare balance sheet for the farm business on both a modified cost and market value basis. B. Prepare net earnings statement for the farm business. C. Prepare cash flow statement for the farm business. D. Prepare monthly cash flow projection for the farm business.	Annual inventory of current, intermediate and long term farm assets taken.					
	Modified cost value of intermediate and long term assets determined.					
	Conservative fair market values for all assets estimated.					
	Short, intermediate, and long term debt levels determined.					
	Farm business net worth calculated on a cost and market value basis.					
	Changes in farm business net worth calculated.					
	Factors affecting change in net worth evaluated.					
	Net cash operating income calculated.					
	Changes in inventory values calculated.					
	Capital purchases and sales identified.					

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6. Prepare farm business financial statements *(continued)*.	Net farm earnings calculated.					
	Changes in accounts payable identified.					
	Family living expense calculated.					
	Annual principal debt payments calculated.					
	Sources and amounts of all cash-in flows and outflows identified (monthly, annually).					

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7. Complete a farm business analysis						
Criteria:						
A. Provide inputs for computer analysis of the business.	Source documents necessary to obtain farm analysis inputs compiled.					
B. Calculate key financial measures of farm business performance.						
C. Calculate key measures of production efficiency for the farm business.	Entries to farm business analysis input sheet made.					
D. Compare business performance to personal goals.	Farm financial data used to perform liquidity, solvency, and profitability calculations.					
	Farm production data used to perform enterprise production analysis.					
	Farm analysis calculations for own operation compared to acceptable standards.					
	Factors causing deviation from acceptable business standards for financial and production measures on own farm evaluated.					

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8. Organize an efficient farm office. Criteria: A. Establish filing system providing convenient access to current and past farm business and production records. B. Provide comfortable working environment for recordkeeping and business management functions.	Farm business records organized and accessible for use in decision making and analysis.					
	Specific area established to serve as a farm business office.					
	Environmental conditions in the farm office comfortable and conducive to conducting farm business.					
	Office equipment in place and adequate for conducting farm business.					

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9. Develop a plan for selecting and utilizing computer hardware and software in the farm business. Criteria: A. Identify possible applications for a computer in the farm business. B. Identify barriers preventing acquisition and use of a computer in the farm business. C. Identify current industry standards regarding hardware and compatible software. D. Evaluate cost/benefit ratio of using a computer in the farm business.	Identifies way a computer could be used in his farm business using other farms/ farmers as cases in point.					
	Identifies barriers that prevent the successful use of a computer in his farm business.					
	Identifies current industry standards for computer hardware and software.					
	Decision made to implement or not to implement a computer system in the farm business.					
10. Develop a plan for using credit in the farm business. Criteria: A. Evaluate alternative sources of short, intermediate, and long term farm credit. B. Project credit needs and repayment ability using farm financial budgeting resources. C. Plan structuring of farm debt.	Interest rates and interest on loans calculated.					
	Cash flow projection to budget credit needs and repayment prepared.					
	Ratio of short, intermediate, and long term debt determined.					
	Plan developed for the restructuring of debt, if needed.					

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II. Develop an Estate Plan to Meet Farm Business and Family Goals.						
Criteria:						
A. Inventory all farm and personal assets.	All farm and personal assets listed.					
B. Draw up will to meet individual needs.						
C. Use estate planning resources in developing an estate plan.	Fair market value of all farm and personal assets determined.					
D. Include tax implications of alternative estate plans.						
E. Identify professional consultants available to facilitate estate planning.	Location of important and legal documents identified.					
F. Define role of insurance in estate and retirement plans.						
	Will prepared.					
	Discuss estate planning features and uses of the following: wills, trusts, insurance, gifts, annuities, buy and sell agreements, ownership arrangements, lease arrangements, and forms of business organization.					
	Value of gross estate determined.					
	Deductions to the gross estate identified.					
	Net taxable estate calculated.					
	Potential federal estate tax and state inheritance taxes estimated.					

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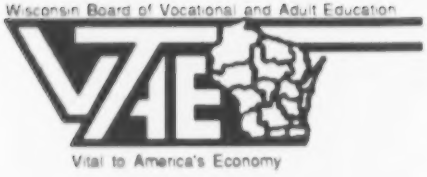
II. Develop an Estate Plan to Meet Farm Business and Family Goals *(continued)*.	Available estate planning consultants identified.					
	Insurance meets business and family needs.					
12. Assess and Plan for Farm and Family Insurance Needs. Criteria: A. Provide for the following insurance needs: health, property/ liability, auto and truck, life/disability, crop	Insurance policies assessed and coverages compared with changes in financial status.					
13. Interpret state and federal tax laws to meet business goals and filing requirements Criteria: A. File required income tax returns and forms. B. Utilize tax management strategies to maximize after tax income. C. Gather information to prepare tax estimate worksheet. D. Interpret property tax calculation.	State and federal tax returns filed.					
	Yearly changes in the tax law affecting the reporting of income and expenses identified.					
	Tax implications when buying and selling farm assets calculated.					
	End-of-year tax planning estimate prepared to be used in making year end purchases and sale decisions.					
	Tax benefits available by participating in the farmland preservation program and forest lands law assessed.					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